

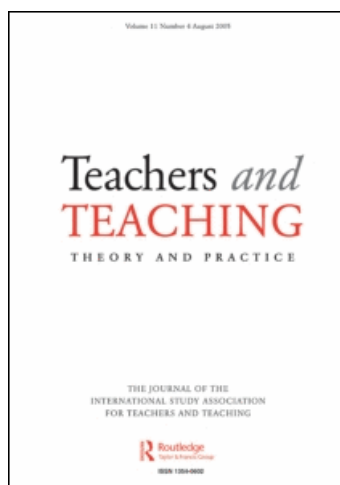
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Access details: Access Details: [subscription number 789754338]

Publisher Routledge

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## Teachers and Teaching

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t713447546>

### Teachers' perceptions of boys' and girls' shared activities in the school context: towards a theory of collaborative play

Pirkko Hyvönen <sup>a</sup>

<sup>a</sup> Centre for Media Pedagogy, Faculty of Education, University of Lapland, Rovaniemi, Finland

Online Publication Date: 01 October 2008

**To cite this Article** Hyvönen, Pirkko(2008)'Teachers' perceptions of boys' and girls' shared activities in the school context: towards a theory of collaborative play', Teachers and Teaching, 14:5, 391 — 409

**To link to this Article:** DOI: 10.1080/13540600802571312

**URL:** <http://dx.doi.org/10.1080/13540600802571312>

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## Teachers' perceptions of boys' and girls' shared activities in the school context: towards a theory of collaborative play

Pirkko Hyvönen\*

*Centre for Media Pedagogy, Faculty of Education, University of Lapland, Rovaniemi, Finland*

*(Received 13 June 2007; final version received 18 February 2008)*

The Finnish educational system and curricula lay emphasis on play, collaboration and equality. Modern educational practices allow the learning environment to be enlarged from indoor classrooms to outdoor playful learning environments (PLEs). PLEs have been constructed in schoolyards in Finland with the goal of increasing learning through play in curriculum-based education and augmenting collaborative play (ColPlay) between boys and girls. In order to better understand and describe such developments, the author set out to ascertain how teachers perceive mixed-gender play activities in pre-primary and basic education. Fourteen teachers were interviewed and the obtained data were analysed using the grounded theory as an analytical approach. The research suggests five premises for ColPlay: (1) the most suitable forms of ColPlay are outdoor games and role-play, (2) gender roles adjust in contemporary play culture, (3) teachers' pedagogical thinking on ColPlay includes various practices to promote collaborative relationships between girls and boys, (4) teachers have confidence in ColPlay and (5) learning to collaborate with both genders requires practice and reflection. The study offers useful insights for teachers, teacher educators and designers of game content and learning environments.

**Keywords:** collaborative play; gender; pre-primary and basic education; playful learning environment (PLE)

### Introduction

The goal of this study was to define the forms of collaborative play (ColPlay) among boys and girls and to analyse ColPlay from the teacher's perspective in Finnish pre-primary and basic education. ColPlay in the school context is significant for a variety of reasons, two of which in particular motivated the study.

The first is derived from the elements of the Finnish educational system and curricula stressing play, collaboration and equality. Learning and developing at the pre-primary level should take place mainly through play that integrates the core areas of the pre-primary curriculum (Ministry of Education, 2000). Basic education should afford a variety of learning activities that provide children with collaborative activities as well as opportunities to exercise their creativity and experience excitement in play. Equality within gender denotes even potential for boys and girls to act with equal rights and responsibilities (Ministry of Education, 2004).

Both core curricula also refer to social flexibility, interaction and collaborative activities: the learning environment should steer children towards acting, playing and working in

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\*Email: [pirkko.hyvonen@oulu.fi](mailto:pirkko.hyvonen@oulu.fi)

groups. Most learning environments, such as classrooms, are designed exclusively for individual activities that only require cognitive effort. This apparent lack of collaborative, emotional, social, physical and cultural approaches to learning reveals the need for an environment that supports teaching, playing and learning as a whole (Wood & Attfield, 2005/1996).

A Playful Learning Environment (PLE), as another motive, could be one solution for addressing this shortcoming. A PLE is an *outdoor* playground environment designed for *educational purposes* that is situated in the schoolyard and supports ColPlay, games and other physical activities. PLEs include nine different pieces of equipment; for example, an *exploration unit* is designed for activities where discovery, wondering and insight are particularly salient. PLEs are enhanced with information and communication technologies (ICTs) that provide some ready-tailored games, whose goal is to increase collaborative physical activity connected with educational tasks.

PLEs provide a variety of opportunities to include play in curriculum-based education, but teachers and teacher educators must know how to design educational and meaningful play using PLEs and be aware of the added value of PLEs. One expected value of PLEs is increased collaboration among children, especially between boys and girls (Hyvönen & Kangas, 2007). Boys and girls have equal opportunities to use ICT in collaboration and to play the games together, since the software in PLEs allows users to create games of their own. Teachers in this situation need to implement approaches that provide activities involving both genders, rather than separating them.

Therefore, it is important to first define such play and then study it empirically. To this end, this study considered boys' and girls' shared play as perceived by teachers at the pre-primary and basic education levels in Finland.

### ***The dimensions of collaborative play***

Collaboration in play refers to processes in which shared activities, creation, enjoyment and knowledge construction are present (Bodrova & Leong, 2003; Hyvönen & Ruokamo, 2005; Kieff & Casbergue, 2000). In this study, two dimensions of ColPlay were highlighted – play and gender. These then underpin four aims (Figure 1): (1) to increase play with peers in children's everyday lives, (2) to integrate play into curriculum-based education, (3) to help children learn to collaborate with peers of both genders and (4) to broaden culturally constructed gender domains. Ultimately, ColPlay in the school context focuses on learning and developing.

### ***The play dimension***

The school context provides possibilities for practicing collaboration through play. It is particularly important for children who do not spend a lot of time after school with their peers (Settertobulte & Gaspar de Matos, 2004). Play itself is vital to learning and development and should have a significant role in daily practices in curriculum-based education (Hyvönen & Ruokamo, 2005; Kieff & Casbergue, 2000; Wood & Attfield, 2005/1996).

Collaboration in play is even more important because through collaborating children learn how to interact and construct creativity and knowledge together. Indeed, ColPlay plays a crucial role in children's thinking, verbal negotiation and problem solving (Bailey & Moar, 2003; Holmes-Lonergan, 2003; Tudge, 1992; Williams, 2001). Although collaboration holds potential for learning, learning to collaborate is not so straight forward. As

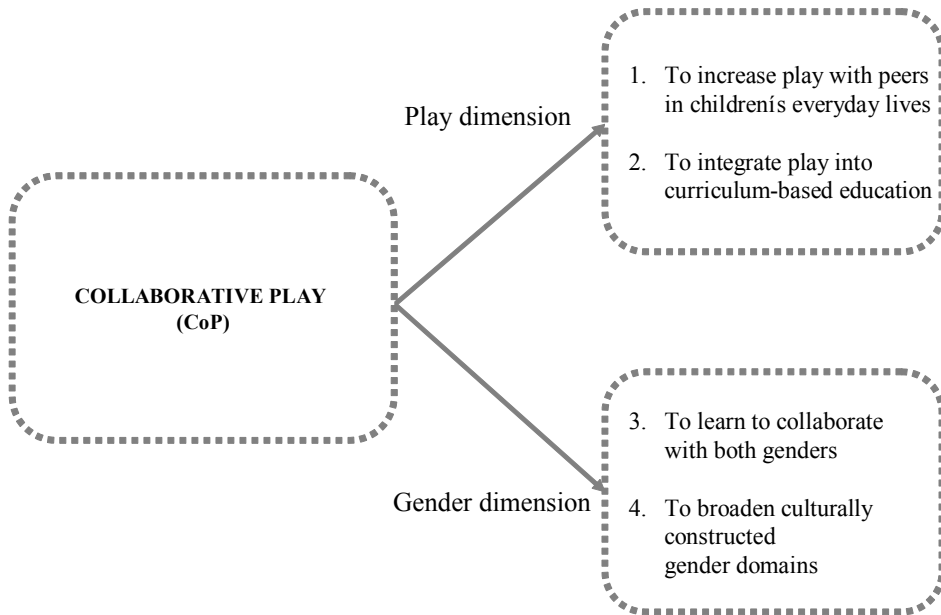


Figure 1. The dimensions of collaborative play (ColPlay).

noted by Littleton and Miell (2004), an understanding of means for supporting joint endeavours and designing strategies for optimising collaboration is needed.

ColPlay hinges on means: the activity and the process itself must be interesting and motivating (see Polgar, 1976). In the school context, the teacher bears responsibility for activities and outcomes; play may therefore take several forms, from free play to ready-tailored stage shows (Hyvönen, n.d.). PLEs and ICT applications provide informal settings for play within the school context, which is considered a formal setting. This can be seen as an essential enhancement, because as Banks et al. (2007) assert, learning takes place in multiple contexts and valued practices of everyday life across one's life span.

### *The gender dimension*

There are several reasons for highlighting collaboration among boys and girls. ColPlay in mixed groups should be practiced in order to broaden socially and culturally shared gendered domains (Thorne, 2005/1993). If certain domains are culturally divided into 'boys only' or 'girls only', this narrowness restricts children's interests and potential. Even young children know that the world is quite dichotomous: objects (Leinbach, Hort, & Fagot, 1997) and even toys (Cherney & London, 2005; Nelson, 2005) belong to the category 'male' or 'female', as do a number of activities (Cherney & London, 2005). Dichotomous thinking impinges upon competencies; for example, Cherney and London (2005) noted that play with gender-stereotyped toys may foster differential social and cognitive skills in boys and girls. This view is related to the notion that gender as a social construction includes cognitive dynamics as well (Maccoby, 1988).

The purpose of ColPlay is to extend social, emotional and cognitive skills and possibilities in children's lives – for boys as well as girls – and to question culturally embedded gender roles. Although belonging to a boys' or girls' group and playing with peers of the

same gender is central for a child (Maccoby, 1988), cross-gender interaction is also needed and should therefore be practiced. In ColPlay, girls and boys can learn of and from each other. From a socio-cultural perspective, learning is based on the assumptions that children adopt in social interactional situations and in play activity (Säljö, 2001); children bring the assumptions they have learned with them as they engage in new settings (Damon, 2004/1991).

The aim of this study was neither to deny the importance of peer interaction within one's own gender group (cf. Pellegrini, 2005) nor to work towards making girls and boys more alike, but rather to find ways for them to play collaboratively. Highlighting the similarities and mutual competencies of boys and girls, not the differences between genders (Sheridan & Henning-Stout, 1994), helps to accomplish this goal. Teachers' theories, beliefs and practices concerning gender in general and cross-gender activities and play in the school context vary greatly and can set challenges for teachers in implementing ColPlay.

### *Challenges for teachers implementing ColPlay*

Theoretical research on play and gender is ambiguous. This may reflect diverse views and skills among teachers, but also circumstances, which differ between schools and cultures. This lack of definitive research data makes understanding play (Pui-Wah & Stimpson, 2004) and gender (Spencer, Porche, & Tolman, 2003), the two critical dimensions in ColPlay, challenging when they are implemented in curriculum-based education.

### *Teachers' epistemologies of play*

One particular challenge is to understand the nature of play and understand learning through playing. Teachers often understand play and learning as dichotomous concepts that are difficult to integrate, either in thinking or practice; therefore, teachers miss the scaffolding opportunities in unstructured play, and play is often identified as a mechanical and teacher-driven activity. Simply increasing play possibilities in the classroom is not a sufficient gesture to add play-based teaching (Pui-Wah & Stimpson, 2004).

This lack of understanding can be explained by inadequate pedagogical knowledge on play-based teaching and learning. A three-year study in Britain showed that teachers' pedagogical knowledge on play-based teaching is limited and that confronting their lack of understanding requires a critical approach to their work. In the same study, however, being critical of one's own work was found to be uncomfortable to the teachers (Adams, 2005; Adams, Medland, & Moyles, 2000).

In addition to the knowledge deficit, there are also gaps between words and practices. Some teachers explicitly report favouring play as a valuable activity, yet their actions explicitly show that they consider play as secondary activity requiring teacher direction (Moyles, 1989). Also contradictory results were shown between self-reported beliefs and the documentable practices of preschool teachers in the USA (McMullen et al., 2006). A number of teachers actually do rely on play-based teaching (Sandberg & Pramling-Samuelsson, 2005), but due to their colleagues' critical manner and oppositely thinking, they have to work under pressure and suspicion. Early childhood teachers in the USA struggle to apply play-based curricula. They are forced to find solutions to resist the pressure of other teachers and administrators in order to implement play in curriculum-based education (Erwin & Delair, 2004).

All of these examples highlight the need for both closer examination of teaching and reflecting practices, including individual teachers' theories, and implementation of new, improved theories and practices (Wood & Bennett, 2000).

### *Teachers' epistemologies of gender*

One factor bearing on the challenge is teachers' socio-cultural consciousness, which Villegas and Lucas (2002) characterise as a need to explore and reflect on the social and cultural groups to which teachers themselves belong. Hence, in both the PLE context and curriculum-based education, it is important that teachers carry out gender analysis to articulate the meanings, attitudes and expectations that they associate with their gender and children's genders. These insights then help them cross socio-cultural boundaries (Villegas & Lucas, 2002) and challenge the myths and false expectations behind gendered role behaviours. If teachers have limited gender-role expectations, they may also have tendencies towards homophobia (Cahill & Adams, 1997), which can reduce their openness to equitable practices.

According to Cahill and Adams (1997) early childhood teachers express some openness towards children's gendered activities, but they feel more comfortable with girls than boys. In other words, girls' behaviour is not as restricted to feminine expectations as boys' behaviour is to masculine expectations. Children interpret these expectations and try to behave in accordance with them. For instance, in cross-gender collaboration situations, girls often take care of the duties of the whole group in order to avoid disappointing the teachers; boys instead will often rely on girls, and teachers frequently consent to that behaviour (Hislam, 2005; Spencer et al., 2003). According to teachers, gender fairness is a priority in their teaching; however, the evidence suggests that this is not always so. The observations and interviews with students showed differential patterns in teachers' behaviour, which suggest a lack of fairness to boys and girls (Spencer et al., 2003).

In addition to inaccurate presumptions of equality, teachers' willingness to arrange teaching and studying situations to support equitable activities, for example group working, is modest at best. Lockheed and Harris (1984) found that some teachers used groups less than one-third of the time, while other teachers did it even more rarely. Based on this study, it appears that teachers recognise certain differences in the needs of boys and girls, but do not organise teaching and learning situations in accordance with these differences. For example, although teachers disclose that boys like to be active and cannot settle to their work, they provide practices that require long periods of sitting, listening and concentrating (Wood, 2003). This may be due to several factors, for instance divergence of epistemologies and practices and lack of active-based learning environments, such as PLEs.

## **Methodologies**

### *Research questions*

The aim of this study was to find a common basis for ColPlay between boys and girls in the school context and to build towards a theory of ColPlay. Teachers' perceptions were used to refine the premises of ColPlay by providing episodes and descriptions from everyday school work in pre-primary and basic education in Finland. The following research question was addressed from the teacher's perspective: What are the play activities that girls and boys engage in together in the school context?

### *Participants*

A number of preschools and basic schools in the cities of Oulu and Rovaniemi were randomly chosen, and the teachers at these schools were asked to take part in the research. The sample was chosen to represent a spectrum of age, experience, gender, and grade and school size. The teachers, aged from 25 to 53 years who participated in the study had

worked in kindergarten through sixth grade ( $n = 14$ , 4 males and 10 females). The distribution of gender among the informants was the same as it is among teachers nationwide: 72.4% of the teachers are women (Kumpulainen & Saari, 2006).

The teachers have specialised widely in such disciplines as primary teaching, social sciences, languages, special education, music, physical education and handicraft. The teachers were told that their views would be used for developing outdoor learning environments (PLEs) and the content of the activities organised there, of which one goal is to find out how ColPlay among boys and girls would be fostered. Gender was not mentioned to them, instead ColPlay was defined as shared play or playful activity among boys and girls in a curriculum-based education, where learning and growing is the aim.

### *Procedures*

Each of the teachers was interviewed regarding his or her preferred practices and expectations of teaching, playing and learning in two pilot PLEs. The interviews and discussions were carried out according to a thematic plan where playing and learning in the school context were discussed also in terms of ColPlay among boys and girls. The teachers were asked questions such as:

- What are, according to your perceptions, the playful activities that girls and boys are able to share?
- What types of games do girls and boys play together without hesitation?
- What is problematic or easy in their play?
- How are possible problems solved?
- How would you use the PLE for ColPlay?

Teachers were asked to give examples and descriptions of such situations. They provided many examples from everyday school work where any kind of playing occurred and analysed those instances as they pertained to ColPlay. They recounted children's actions and reactions and their own teaching practices. They also pondered how they personally could increase play in the school context and how they would use PLEs for ColPlay. The interviews were recorded and transcribed and ranged in length from 40 minutes to two hours.

The empirical data were coded (Figure 2) and memos were written using N\*Vivo qualitative data analysing software (Bazeley, 2007) designed for the grounded theory analytical approach. Grounded theory (Strauss & Corbin, 1998) is useful in organising and comparing concepts in the data, and it is relevant in theory building as well. The categories formed and the theory has a connection with the data, and the theory should explain the phenomena and predict and interpret actions which are connected to them (Strauss & Corbin, 1998). Another factor ensuring validity is the coding and analysing process. In order to carry out these processes, the teachers were contacted a second time by phone or e-mail in order to get more precise information about the social processes of ColPlay. In addition, some of them were asked to read a draft of this article and to assess whether it represents a fair interpretation of their views.

The data were first coded as open coding along the main play types that teachers regarded as collaborative playful activities with boys and girls, that is, role-play and outdoor play. Play and games are difficult concepts to define. They both are governed by rules, but the degree of governing and possibility to negotiate varies, which is one argument for differentiating games from play (Pellegrini, Blatchford, Kato, & Baines, 2004). Although sports such as soccer, orienteering and pesäpallo (Finnish baseball) are played according to



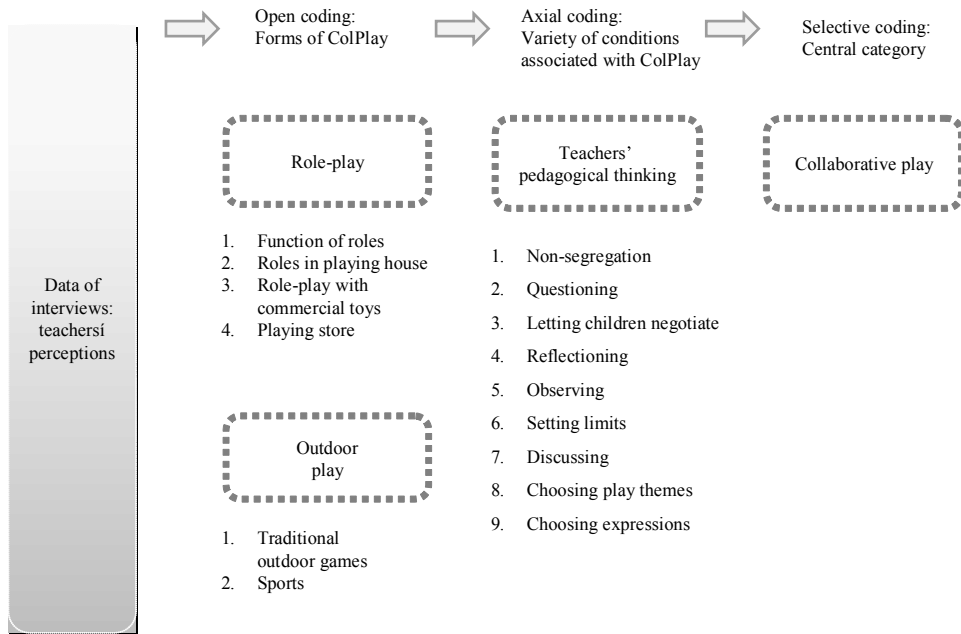


Figure 2. Coding process and categories used in this study.

certain rules, in *play* negotiation is indeed possible. In this study, therefore, play and games are used correspondingly.

The concepts were systematically related, and the types and meanings of each open-coded category were dissected. These qualities then provided the basis for axial coding, which analysed teachers' practices and theories – in this study labelled *teacher's pedagogical thinking*. The axial coding was a process of inductive and deductive thinking that involved several steps. During selective coding, the generation of theory centred on a core category (Strauss & Corbin, 1989), in this case, ColPlay.

Although each of the categories of the coding process explained ColPlay to a certain extent, the core concept pulled the other categories together and explained the whole. In the list of criteria for choosing a core category, the first two are that the category must be central and it must recur frequently in the data. Thirdly, it must relate meaningfully and easily to other categories (Strauss & Corbin, 1998).

## Results

The results section proceeds according to the coding process. The results of the open coding process and axial coding are described first, followed by a premise of ColPlay. Answers to the research question – *What are the play activities that girls and boys engage in the school context?* – concern role-play and outdoor play.

### Role-play

Role-play is highly valued among teachers. As Mark (a pre-primary teacher) concluded, role-play is a common form of play and it is fruitful in fostering girls' and boys' collaboration: 'It does not matter so much if there are boys and girls mixed together in groups; all



kinds of play are possible among girls and boys, but role-play is particularly beneficial, because it affords enough roles for everyone’.

### *Negotiating of roles*

Role-play takes place easily, although negotiating and circulating roles is ambiguous. Two pre-primary teachers, Rita and Jane, told about recent play themes, which were ‘getting sick’, ‘hair salon’ and ‘home’. These themes provide a variety of roles, and circulation of roles provides opportunities to consider issues from different angles and experience situations where giving and receiving or helping and being helped are possible (Bodrova & Leong, 2003). Mark noticed that if roles are assigned only by the children themselves, stereotypical roles are often followed. Boys are usually men, or sometimes knights or dogs. Girls choose the roles of animals; they want to play tiny puppies that will be scratched and taken care of (cf. Hyvönen & Kangas, 2007).

However, children are able to negotiate roles themselves, which is negotiation about power relations as well. In the present study, boys and girls negotiated jointly. This supports the findings of other studies, where negotiating in separate groups made gender-typed communication more likely in same-gender than in mixed-gender dyads (Leaper, 1991). Jane said that when the theme was getting sick and visiting the doctor, the girls dominated the main roles, because there were strong girls in a certain group. After a while, the boys noticed that they had not had a chance to play doctor but had been only patients, so they reversed roles. All in all, according to Jane and Rita, children circulate roles rather well. Collaboration and socialisation within the group become evident when they negotiate roles. The children made sure that no one dominated the negotiations and that the roles were circulated fairly.

Yet, circulation of roles does not always proceed smoothly, which provides a window of opportunity for conciliation by teachers in which they may question gendered roles during play, as Rita did in the following example. In her preschool, the teachers set up a hair salon where children played the roles of hairdressers and clients. Girls and boys played smoothly together, but one day the teacher noticed that Will took only the role of customer; he just kept on sitting down as a customer and let the others act as employees. As Rita described the situation, she said to Will: ‘Right, you are a customer again. Don’t you work as an employee at all, as a hairdresser?’ Will answered: ‘Oh no! I am a man’.

He thought that women should be active in serving customers and that men should be the ones who are served. In this respect, his play was passive – just sitting. Rita considered that one goal in education should be to get children to realise that gender boundaries should be overcome. Rita did not give the child any ready-tailored ideas but did give some hints in a positive way. For example, she told Will that there are a lot of men working in hair salons and that they are skilful in their work. After a while, Will changed his mind and started to put curlers in the hair of a female customer.

### *Roles in playing house*

Playing house is comparable to running a hair salon. The teachers related that some boys regularly play house with girls: usually the girls cook and set the table and the boys come in to visit the girls and have dinner. In a Swedish study, boys cooked as well (Sandberg & Pramling-Samuelsson, 2005). Here in Finland, the girls are the ones who serve and the boys are served as guests. The teachers noticed similarities to gendered role models, where the borders between the work of men and women are strong and still prevail in some families,

although Finland is ranked as the second best country with regard to gender equity (Social Watch, 2007). The teachers did not expect role models to be that strong any more. This raises a question of how well teachers generally know children's lives and informal environments, which should serve as a basis for pedagogical decisions (McCaughy, 2005).

These role adaptations tell about activity and passivity as well. Here boys acted in a passive manner whereas in other studies, boys' gender images included more activity and achievement features than girls' gender images (Adler, Kless, & Adler, 1992). Activity and how a child is involved depend on the context and may vary during play, but it is remarkable in these examples that the boys and girls really played collaboratively and reciprocally. Holmes-Lonergan (2003) has concluded that even four- to five-year-old children are able to alter their behaviour type depending upon the gender of their partner and the type of task. This occurred in the present cases well.

Sally (a pre-primary teacher) noticed that a change is occurring in playing. Never before during her lengthy career had boys been eager to play house, but now they are. Walkerdine (1990) found that boys usually had subservient roles in domestic play; for instance, they very rarely played powerful fathers. In the present data, the reverse is true: the boys usually adopted the role of father, although they might also be police officers, guards, dogs or toddlers. Typically, the toddlers are naughty, run away and the police officer's role is to find them, bring them home and try to make sure that they do not escape anymore.

On the other hand, girls are clearly the leaders of the activity and define the rules and the plot. This example shows that boys bring running and chasing into playing house through different roles. The father, police officer and guard are male roles, and the role of the toddler involves a naughty and disobedient character. The teachers interviewed concluded that this tendency was a question of the type of child, which relates to the child's characteristics, play preferences and dispositions: some boys are 'sports types', who prefer physical activity. These examples also show that ColPlay include *border work*, where gender boundaries are activated and enforced in cross-gender interaction. Occasionally, when collaboration goes smoothly in relaxed situations, borders diminish – these are the situations the teachers described by saying: 'It doesn't matter if there are boys or girls'; but sometimes, borders are created or activated either through contact or avoidance (Thorne, 2005/1993).

The present study shows that chasing is not exclusively for boys, but for both genders. Chasing, which is related to border work (Thorne, 2005/1993), has a special meaning among six-year-old children. Rita said, 'Boys look at the girl that they like and think: should she run after me, or should I run after her?' However, boys are usually more discrete than girls, whereas the girls are active in snatching boys for themselves. Rita said that girls nowadays are pushy; they just go and take boys prisoner. Indeed, Walkerdine (1990) has remarked that the stereotypical image of the weak and dependent girl is misleading. According to Thorne (2005/1993) in 'girls chasing boys' games, girls and boys form separate teams, in which individual identities are overridden by gender terms.

### ***Role-play with commercial toys***

Mark described children playing with Barbies and Bionicles in his group. It is interesting that although children choose Barbies for girls and Bionicles for boys – as Nelson (2005) argued, in the present study boys and girls played with the figures together. Paradoxically, Barbies and Bionicles, which represent stereotypically female and male toys, prompted boys and girls to play together. This raises the question of whether it is somehow easier for boys and girls to play together with these commercial toys and roles? Barbies represent

urban adult worlds and by playing with Barbies, children – girls as well as boys – appropriate information from the adult world to produce their unique peer culture (Corsaro, 1992; Corsaro & Eder, 1990).

In ColPlay, boys dressed and undressed Barbies and acted out domestic roles with them. Girls taught boys how to play with Barbies but the reverse did not happen; boys did not seem to teach girls to fight with Bionicles. The Bionicles include heroic male characters that are armed and have amazing powers. Superhero play correlates with the characteristics of manhood, of which various features have been identified, such as the ideas that men are winners and settle disagreements physically (Soulliere, 2006). Superhero play can reinforce border work between boys and girls, but in the present study it did not happen.

### *Playing store*

Ann (a fourth-grade teacher) considered all kinds of play to be suitable for boys and girls, but found that keeping store was the most popular form of ColPlay: 'My students, including the boys, kept on asking enthusiastically when we would set up a store again. They would bring in empty cereal packages ... they set up the store and pretended to be clerks and customers'.

Most of the teachers mentioned that pretending to run a store or kiosk (arranging the store, pricing and labelling goods, and selling and buying) are very inspiring for boys and girls at the pre-primary and basic education levels. Sorting goods, possessions and money also exercises classification skills, an important activity in lessening children's stereotypical thinking, which is attributed to deficient multiple classification skills (Bigler & Liben, 1992; Leinbach et al., 1997). Exercises can improve these skills in some children, and interventions contribute to less dichotomous attitudes towards the genders (Bigler & Liben, 1992).

### *Outdoor play*

A particularly interesting remark was one made by Ann, who said that boys and girls become inspired once they get out of the classroom. Although children consider the school lobby interesting, the outdoors is perceived as more inspiring. A similar preference has been found among children in the USA: 68% of boys' activities and 50% of girls' activities took place outdoors (Cherney & London, 2005). Among Finnish school children, shared playing activities, such as different types of chasing and catching each other, are most easily done outdoors. Sometimes children are too hasty and reckless in chasing games, which makes the activities so dangerous that teachers are forced to forbid them.

According to Boyatzis, Mallis, and Leon (1999), the *type of play* or game is more important for boys than for girls. Games where physicality and competitiveness are salient features influence gender-based peer preferences among boys and cooperativeness and non-physicality among girls (Boyatzis et al., 1999). The teachers in this study did not make such strong demarcations. Instead, a common view among teachers was that outdoor activities are suitable for boys and girls alike and that it does not matter if a child's partner is of the same or the opposite gender.

### *Traditional outdoor games*

The teachers interviewed noticed a change during the past year: traditional games have come back in vogue. Sally said that the initiative in their group came from a pre-schooler. Since then the class has deliberately revived a lot of traditional games, and these are popular

as joint activities for girls and boys. Boys and girls play the traditional outdoor game *pesäpallo* together, as well as 'ten sticks on the board'. At the time when the interviews were conducted, there was a real boom in 'ten sticks on the board'. It had become so popular that children and their teachers were making new wooden boards and sticks, as Mark pointed out.

### **Sports**

Sport participation seems to mediate peer acceptance and later self-esteem for girls and boys, but especially for boys (Daniels & Leaper, 2006). Recent studies (Cherney & London, 2005) have shown also that although boys have reported engaging in more sports than girls do, both listed sports as their favourite activity. According to this study, sports such as orienteering and diverse types of outdoor ballgames are shared domains of boys and girls, but soccer is more popular among boys than girls.

Girls from grade three were eager to play soccer with boys, and the boys accepted this; however, the boys felt that they were much better at soccer than the girls were. They did not consider it worth passing the ball to girls, because they probably would not get it back again. Kim, who teaches physical education in several grades, did not think that there really are big differences in skill between boys and girls. The principal differences are between the regular pupils and those who have been playing in junior divisions or leagues; they are somewhat more skilful in technique and in understanding the game. However, girls are eager and certainly do not lag behind boys in running or other skills, revealed Kim.

A study done in London showed that most boys who played soccer regularly were not particularly skilled, and that girls could be as good as they were (Epstein, Kehily, Mac-an-Ghaill, & Redman, 2001). According to the Finnish teachers interviewed for this study, some girls and some boys showed clear skill and a comprehensive grasp of the game; for instance, they knew enough to get out of passing shadows. It is a question of age as well: 10 year olds are seldom particularly skilled in soccer.

Basically girls and boys want to play soccer together, but they have not found out how to do so. Kim, the teacher, discussed playing soccer collaboratively. Then one boy illuminated the problem: 'When I passed the ball to a girl, I didn't get a chance to *play*'. The teacher replied: 'If you pass the ball to someone on your team, that *is* playing'. The boy and the whole group got something to think over: What is playing? This example demonstrates that ColPlay has to be analysed, practiced and learned; it does not come naturally or easily.

Physical education provides a fruitful arena for play in the contexts of school, games and collaboration. Liv, Lisa and Kim (first-, second- and third-grade teachers, respectively) gave examples of very popular games, such as ambulance tag (see Hyvönen, n.d.), that not only provide a lot of physical activity but also involve quite a bit of negotiating and thinking together. Children have to act collaboratively in order for the game to work. These games promote togetherness. In addition, activities with music and swimming bring boys and girls together.

### **Teachers' pedagogical thinking**

When compared, open coding categories were interrelated to teachers' pedagogical thinking, which conceptualises axial coding. Since the forms of ColPlay and teachers' pedagogical thinking were included in the same phenomenon, perceptions of teachers' pedagogical thinking provided a more accurate and complete explanation of the ColPlay phenomena (Strauss & Corbin, 1998).

The theories and practises of the teachers can be elaborated on with reference to the teacher's descriptions of interaction situations, where the concept of pedagogical thinking (Kansanen, 1993; Kansanen et al., 2000) is useful. Pedagogical thinking is defined as educational decisions that teachers make in the school context based on certain criteria. Pedagogical thinking affects teaching practices, educational contexts and curriculum, hence it has pedagogical aims (Kansanen, 1993; Kansanen et al., 2000). Pedagogical content knowledge (PCK) is a related concept to pedagogical thinking, although it stresses both knowing subject matter and understanding the students (McCaughy, 2005). Both concepts are useful in analysing and discussing how teachers think and make decisions about teaching.

Teachers in this study reported that they do not separate gender in their daily practices, which will be referred to here as *non-segregation*. By those means they purposefully indicate to children how children are expected to behave, whether they are playing or doing something else. Thorne (2005/1993) defines that as relaxed mixed-gender interaction among girls and boys, which typically denotes to teachers' responsibilities for forming groups and setting up activities. When grouping children, teachers should use other criteria than gender or race, as Alice (a second-grade teacher) did. She said that as a matter of principle she never separates girls and boys, for instance, by dividing them into girls' queues and boys' queues.

In addition to not separating genders, *questioning* (see Bigler & Liben, 1992) children's behaviour and making them *reflect* on it – as seen in the hair salon and on the soccer field – seem to be effective ways to dissolve gender boundaries. Sometimes merely questioning is enough, but discussions are often needed as well (Tudge, 1992; Williams, 2001). It is important also to provide situations in which children have to *negotiate by themselves*, as the examples of role negotiation highlighted. Pre-primary teachers related that this is how their students learn to negotiate.

Teacher's pedagogical thinking also includes *observing play and setting limits* for it, especially through recesses. Ann, like several other teachers, observed that boys and girls played together surprisingly frequently during recesses. Recess provides an opportunity for other collaborative activities as well (Pellegrini, 2005). One popular game among eight to nine year olds at the time of the study was hugging. Kerstin described the game, which takes place outdoors during recess: 'They just hug and hug without letting go, but we made an agreement that they could not kiss'. Children just play, have fun and are active together; they use the body playfully and conduct little experiments in motion (Thorne, 2005/1993). This interaction in hugging is probably infused with heterosexual meaning, but does not include any form of teasing (cf. Thorne, 2005/1993).

In one class, children *discussed* different hobbies and pondered which ones are more suitable for girls and boys. The divisions were easy to predict. Boys find ice hockey completely inappropriate for girls. However, after discussing the matter, the children discovered that hobbies are not related to one's gender. The boys found that there are also female hockey players. This kind of discussion, called collaborative reasoning, tends to maximise peer effect (Wilkinson, Parr, Fung, Hattie, & Townsend, 2002). Teachers are needed for tutoring discussions, but sometimes it is better for them to remain onlookers and let the pupils manage the discussion, as Kerstin highlighted with an example. Two second graders, Tom and Emily, were discussing hobbies. Emily made the point that boys, too, can go horseback riding and take care of horses, and even like it. But she discovered that there also might be some limitations in some hobbies and continued: 'in some cases gender has to be taken into account'.

*Play themes* seem to be effective when pedagogical goals and collaboration are considered. Teachers choose themes where gender boundaries will be crossed. The teachers

interviewed proposed a variety of fruitful curricular content for ColPlay but, according to John (third-grade teacher), the natural sciences readily provide content that encourages joint playing for boys and girls at school.

One key question in terms of ColPlay is teacher *expressions*, that is, what words she/he uses. Teachers in basic education are cautious about using the word 'play'. Play is associated with young children, not school. Kim said, if a teacher talks about 'teams', fifth and sixth graders (11–12) will not play in mixed groups. But if activities are marketed without the word 'team', there are no obstacles to ColPlay or games. I wonder if 'team' is too strongly associated to competition with winning strategies and physicality, which changes the nature of play and the power relations within it. Gender favouritism among competitive boys is greater in competitive games than less competitive games (Boyatzis et al., 1999), which may account for them avoiding teams.

## Discussion

Using the grounded theory approach (Strauss & Corbin, 1998), the central category – ColPlay – represented the main theme of this research. It also pulled together other categories, such as forms of ColPlay and aspects of teachers' pedagogical thinking.

The 14 teachers in this study expressed their perceptions of ColPlay and revealed their pedagogical thinking on implementing it. There were five sets of topics to further discuss regarding to ColPlay.

First, *the most suitable forms of ColPlay are role-play and outdoor play*, both of which can be carried out using PLEs. The teachers provided various examples of role-play based on their perceptions. In addition, they formulated a choice of role-playing activities to play at PLEs that integrate the curriculum with play and also integrate school subjects, such as history, natural science, mathematics, physical education, and Finnish and English languages.

Outdoor ColPlay, which traditionally is related to physical activity, includes forms of traditional games (e.g. ten sticks on the board) and sport games (e.g. pesäpallo, orienteering and soccer). Finnish teachers believe these types of outdoor play afford opportunities for ColPlay among girls and boys; although in other studies, physical outdoor games were seen as a boys' activity (Adler et al., 1992; Pellegrini et al., 2004). Pellegrini et al. (2004) concluded that outdoor play spaces favour boys more than girls. In addition to Ann's perception that children enjoy being taken out of the classroom, PLEs provide a novel environment for playing and learning, which attracts boys and girls and their joint play and games.

Second, *gender roles adjust in contemporary play culture*. Although stereotypical gender norms were visible in children's play, some unexpected notions of gender were reported by the pre-primary teachers. They noticed that boys and girls play domestic play together more than ever before. Girls and boys also played hair salon collaboratively without hesitation. Only one boy was doubtful about gender roles. Pre-primary boys were also willing to play Barbies with girls, which is regarded to be a kind of domestic play as well. This development reflects the theory that cultural and social gender norms are altering, which has also been noticed in a Swedish study (Sandberg & Pramling-Samuelsson, 2005).

This change is grounded in children's production of contemporary peer culture in play. They do not just copy the adults' world, but creatively transform the information from the adults' world to meet the concerns of their peer world. Play then functions as a socially shared domain for producing new culture (Corsaro, 1992). In this sense, ColPlay and PLE provide an interesting window to study what concerns girls and boys face today. It is



important for teachers in their pedagogical thinking to understand children and their unique world (McCaughtry, 2005). Another interesting point for teachers is that children can learn to decrease gender attitudes. This, however, requires training and giving children the opportunity to practice gender and occupational roles – as was done by the teachers in this study – to present non-sexist criteria for gender appropriate behaviour (Bigler & Liben, 1992). Although gender stereotypes are resistant to change (Maccoby, 1988), the data from this study suggest that children have the ability to implement cognitive, social, emotional and physical change in the gender positions in their daily routines.

The perception that boys chase girls and girls chase boys is common way to address border work (Thorne, 2005/1993), but the observation that girls are more aggressive physically and pushier than boys, contradicts some earlier studies (Pellegrini et al., 2004). What kind of implications this development has on children's play and development should be studied more precisely in PLE settings in a school context.

Third, *teachers' pedagogical thinking on ColPlay includes various practices to promote collaborative relations between girls and boys*. This research indicated the following practices to promote collaborative relationships between girls and boys: non-segregation of boys and girls; questioning existing gender norms; letting children practice negotiation; examining interactive situations among children; observing children's collaboration; discussing gender, norms, play and collaboration; and choosing appropriate play themes and expressions to be used with children.

These practices may not be revolutionary, but they do highlight the importance of teachers being constantly aware of when to intervene and when to stay an onlooker. They are also good points to consider when attempting to ensure that values of cooperation are reinforced among all children (Thorne, 2005/1993).

Although teachers' personal concepts of teaching, learning, children, gender, play and collaboration, have a central role in teachers' thinking, instructions are always directed by the curriculum (Kansanen, 1993; McCaughtry, 2005). A relevant question then is: how is the curriculum read and understood? Is it seen merely as a collection of cognitive goals to be achieved, or is it rather a useful tool that guides teachers to consider cognitive, social, emotional and physical aspects in the teaching and studying processes, in which *studying* is seen rather as an activity of *playing* collaboratively? In this respect it is important to increase both teachers' expert knowledge about their work and understanding on which premises their decision-making is based, because these increase freedom and autonomy in their work within the curricular frame (Kansanen, 1993). This is a challenge for teacher education and for teachers themselves, as well.

Teachers in this study were not challenged by resistance against play-based teaching from their colleagues or administrative personnel (Erwin & Delair, 2004), but rather by the difficulty of finding proper ways and decent environments to integrate play with curriculum. One solution for this problem is a process-oriented conception of learning (Bolhuis & Voeten, 2004; Hyvönen, 2007; Kangas, Hyvönen, & Latva, 2007). Learning activities were carried out as playful learning processes, which include *orientation*, *play* and *elaboration* phases. Orientation and elaboration may proceed in the classroom, but the play phase would take place outdoors in the PLE. The forthcoming experiments in authentic school settings in Finland and Netherlands will illuminate the strengths and challenges of the playful learning process.

Although gender boundaries are enforced in the school context (Pellegrini et al., 2004; Thorne, 2005/1993), the same context has also positive effects for ColPlay. There are lots of children to play with, and teachers can organise children into small, heterogeneous and cooperative groups. They can also facilitate children's access to various activities, which



promote collaborative relations among girls and boys (Thorne, 2005/1993). In addition, as the teachers in this study have noticed, when children know that playing is supposed to be educational, everyone – girls as well as boys – takes part, and the children play as expected, together. But when they are together without adults, segregated playing is more common, as stated in earlier studies (Thorne, 2005/1993). However, both forms are meaningful for children.

Fourth, *teachers have confidence in ColPlay*. This study shows that teachers did talk about boys and girls, and they considered the benefits of ColPlay. They also did not relate encountering any real problems with collaboration in play. The clearest example came from Lisa, who did not face any troubles. Instead, she asked whether there are any games that boys and girls *cannot* play together.

The teachers described situations where ColPlay did happen and when girls and boys faced some struggles, but they did not really reflect explanations for that. The teachers did see differences between boys and girls, but they did not separate activities according to gender in their descriptions. This was seen, when they created play activities for PLEs. The following example clarifies that notion.

When I asked John what the elements for genuinely ColPlay among boys and girls were, he answered that: 'Any environment that provides possibilities for drama or acting is superior. Play that involves exploring nature or other things is suitable for boys' and girls' collaborative activities and is also easy to integrate into the curriculum'. For example, John said he would propose a basic plot for a play and help the children create an imaginary situation (see Bodrova & Leong, 2003); the children would pretend to be in the research centre of a polar glacier, where their duty is to explore particular things. They would never question whether the gender roles were appropriate; one of the girls would act as a guard, who protects the station staff from polar bears or even seals. Gender roles are not important for children in this kind of play, he concluded.

Fifth, *learning to collaborate with both genders needs practice and consideration*. One of the aims of ColPlay is to learn to collaborate. The data showed, for instance, that in areas that are traditionally for boys (soccer), practicing is needed. The teachers' role should be to guide the children to examine their playing habits. On the other hand, playing with Barbies was successful, because girls guided boys, who were willing to learn. Playing store and games like ambulance tag (Hyvönen, n.d.) were played regularly, and children learned to collaborate in those. Learning to play collaboratively also depends on suitable themes, roles and expressions and on how well the children and teachers know each other, as Kate asserted. If they have been in the same school and in the same group for several years already, they know one another and have a shared history of belonging to the same group. If the teacher has used certain types of shared activities and games, the children know them and find them natural.

In addition to familiarity, the quality of joint activity should be taken into account when collaboration is practiced and group activities are desired to begin promoting collaboration (Dawes & Sams, 2004). The quality can be addressed in play (Bodrova & Leong, 2003; Hyvönen & Ruokamo, 2005; Moyles, 1989), but in order to learn collaboration, talking and listening must be incorporated. Using spoken language as a tool for thinking together is useful for reasoning things through (Dawes & Sams, 2004). In fact, examples were already provided in this research, when children discussed boys' and girls' roles. Leaper (1991) and Holmes-Lonergan (2003) suggested that educators should encourage children to participate in cross-gender interaction. The results of this study suggest that encouraging joint interaction among girls and boys is important, but is not adequate. In order to learn collaboration, deeper questioning, reasoning and practice are needed.

## Conclusions and limitations

The goal of the study was to define the forms of ColPlay among boys and girls and to analyse ColPlay from the teacher's perspective in Finnish pre-primary and basic education. According to the data the premises for ColPlay are the following:

- (1) The most suitable forms of ColPlay are role-play and outdoor play, both of which can be carried out using PLEs. Although the children's ages vary from 6 to 12, these two main activities are common. An interesting detail is that traditional outdoor games are now strongly alive.
- (2) Gender roles adjust in contemporary play culture. Stereotypical male and female forms of play seem to intertwine. This was seen, for instance, playing home, hair salon and soccer.
- (3) Teachers' pedagogical thinking on ColPlay includes various practices to promote collaborative relations between girls and boys. The activity alone does not generally guarantee collaboration in play; practice, teachers' pedagogical thinking (i.e. educational choices) and interventions are needed as well. The challenge is to integrate curriculum with play in an appropriate manner. The playful learning process and PLEs are expected to help with this integration.
- (4) Teachers have confidence in ColPlay. Teachers see ColPlay as positive development in the school context.
- (5) Learning to collaborate with both genders requires practice and consideration. Collaboration among boys and girls does not come naturally or easily; it should be practiced, discussed and analysed.

## Limitations

There are some limitations in this study that should be noted. The first limitation is a potentially low number of informants, although the data were saturated. Studies with larger data would be useful for defining more accurate premises for ColPlay. The other limitation is related to challenges to researching pedagogical thinking. The perspective studied in this study was that of the teachers. Although the teachers pointed out the importance of equity between boys and girls, there are always differences between actions and words (Säljö, 2001); therefore, studies in authentic settings with other methods, such as observing should be conducted. In addition to teachers' perspective, children's views should also be studied in order to hear children's perspectives on the matter of ColPlay.

As a whole, the present study has fulfilled its stated purpose (Strauss & Corbin, 1998), which placed teachers in a key position. This research is important for teacher training and educators who integrate play into curriculum-based education and who seek to take advantage of PLE. A PLE, which is possible to use with or without technologies, is one solution designed to address ColPlay needs in pre-primary and basic education. In this respect, this study is useful also for PLE designers and manufacturers.

## Acknowledgements

The author would like to acknowledge the support received from the Doctoral Programme for Multi-disciplinary Research on Learning Environments during the years 2006–2007 and LEVIKE project in 2007.

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